

## Debt Program

Union County borrows funds through the use of various debt instruments; typically general obligation bonds, installment financings (certificates of participation (COP's), limited obligation bonds (LOB's), and private placements), revenue bonds, and N.C. Clean Water Revolving Loans (NC CWRL). Principal and interest debt service payments are appropriated annually in the annual operating budget(s).

General obligation bonds are approved through voter referendum and collateralized by the full faith, credit, and taxing power of the County. Certifications regarding restrictions, covenants, budget data, and financial disclosure are reported annually for general obligation debt. Currently, there is no outstanding authorized and unissued referendum approved general obligation debt.

Installment financings are typically collateralized or secured by the assets financed and not the taxing power of the County. However, installment financings require the County to follow customary covenants including providing insurance certificates, budget data, and annual financial disclosures.

Revenue bonds are secured by the pledge of net revenues. In the County's case, it is derived from the water and wastewater system revenues, and the County follows the requirements of the revenue bond debt indentures.

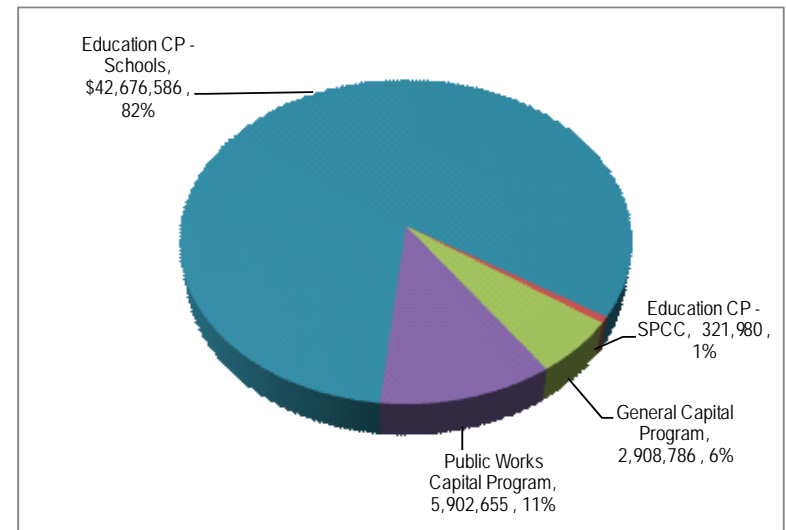
The County currently operates under indentures with U.S. Bank National Association as trustee. The indentures authorize and secure all outstanding revenue bonds of the County's water and wastewater system and contain several financial and operating covenants including rates, additional bonds, reserve funds, annual budgets, maintenance of the system, and insurance. The County is in compliance with all such covenants during the fiscal year ended June 30, 2015. The covenants are tested retrospectively annually during the audit process. It is anticipated the County, will continue to remain in compliance.

The County has two outstanding N.C. Clean Water Revolving Loans (NC CWRL) provided by the North Carolina Clean Water Revolving Loan and Grant Fund. The loans are payable over twenty years and are secured by the net revenues of the water and wastewater system. Additionally the loans contain financial and operating

covenants. The County was in compliance with all such covenants as of June 30, 2015. The covenants are tested retrospectively annually during the audit process. It is anticipated the County will continue to remain in compliance.

The County has been prudent in its use of debt funds through the years. The County's total proposed debt service per capita, in FY 2017, is estimated to be \$235. This is comprised of \$194 for Union County Public Schools capital program, \$1 for South Piedmont Community College (SPCC) education capital program, \$27 for public works capital program, and \$13 for the general capital program.

Capital Program	Debt Service FY 2017	Debt Service / Capita
Education CP - Schools	\$ 42,676,586	\$ 194
Education CP - SPCC	321,980	1
General Capital Program	2,908,786	13
Public Works Capital Program	5,902,655	27
<b>Total</b>	<b>\$ 51,810,006</b>	<b>\$ 235</b>



In accordance with the provisions of the State Constitution and The Local Government Bond Act, as amended, allowing for issuance of all presently authorized bonds, the County has the statutory capacity to incur additional net debt in an approximate amount of \$1,565,416,207, the legal debt margin, as of June 30, 2015. This debt analysis does not include operating leases or other County leases as they are typically secured by the purchased asset.

### Credit Ratings

The County's current credit ratings are as follows:

Debt Type	Moody's	Standard & Poor's	Fitch
GO Bonds	Aaa	AA+	AAA
Revenue Bonds	Aa1	AA	AA

**Union County, North Carolina had their General Obligation Bond Ratings upgraded by Moody's Investment Services and Fitch Ratings in November 2015, from Aa1 to Aaa and AA+ to AAA, respectively.**

**Additionally, the County's Revenue Bond ratings were upgraded by Moody's Investment Services and Standard & Poor's in November 2015, from Aa2 to Aa1 and AA- to AA, respectively.**

### County Wide Debt

Subsequent to the adoption of the FY 2017 Budget, the Board of County Commissioners directed staff to implement referendum based debt (General Obligation Bonds), and the following discussion reflects that direction. These changes will not directly tie to the Capital Improvement Plan, as adopted on June 10, 2016.

The following table illustrates the current debt service as well as the future debt service associated with new debt issuances included in the proposed FY 2017-2022 Capital Improvement Plan.

Based on the FY 2017-2022 Capital Improvement Plan new debt issuances, the County wide debt service reaches its highest point in FY 2023, due to the timing of various principal and interest payments and proposed new debt service for the education capital program (\$94.22 million), the general capital program (\$111.4

million), and the public works capital program (\$385.1 million by FY 2022).

County Wide Debt Amortization Schedule			
Fiscal Year	Principal	Interest	Total
FY2017	\$ 37,869,861	\$ 15,473,384	\$ 53,343,245
FY2018	37,706,602	14,259,204	51,965,806
FY2019	44,929,633	22,780,361	67,709,993
FY2020	48,421,000	26,037,992	74,458,992
FY2021	45,626,000	28,847,892	74,473,892
FY2022	45,516,000	27,023,058	72,539,058
FY2023	49,851,000	34,638,857	84,489,857
FY2024	47,241,000	32,527,883	79,768,883
FY2025	47,296,000	30,557,947	77,853,947
FY2026	46,766,000	28,654,632	75,420,632
FY2027	45,406,000	26,806,333	72,212,333
FY2028	45,396,000	24,890,469	70,286,469
FY2029	44,051,000	23,090,693	67,141,693
FY2030	41,456,000	21,342,720	62,798,720
FY2031	33,406,000	19,782,629	53,188,629
FY2032	30,641,000	18,358,104	48,999,104
FY2033	28,316,000	17,005,740	45,321,740
FY2034	27,636,000	15,661,812	43,297,812
FY2035	27,161,000	14,295,175	41,456,175
FY2036	28,001,000	12,937,125	40,938,125
FY2037	28,861,000	11,559,825	40,420,825
FY2038	29,766,000	10,140,225	39,906,225
FY2039	25,500,000	8,672,700	34,172,700
FY2040	21,455,000	7,419,225	28,874,225
FY2041	20,960,000	6,368,750	27,328,750
FY2042	22,000,000	5,320,750	27,320,750
FY2043	23,130,000	4,220,750	27,350,750
FY2044	17,540,000	3,064,250	20,604,250
FY2045	18,420,000	2,187,250	20,607,250
FY2046	12,340,000	1,266,250	13,606,250
<b>Total</b>	<b>\$ 908,275,095</b>	<b>\$ 492,763,983</b>	<b>\$ 1,401,039,078</b>

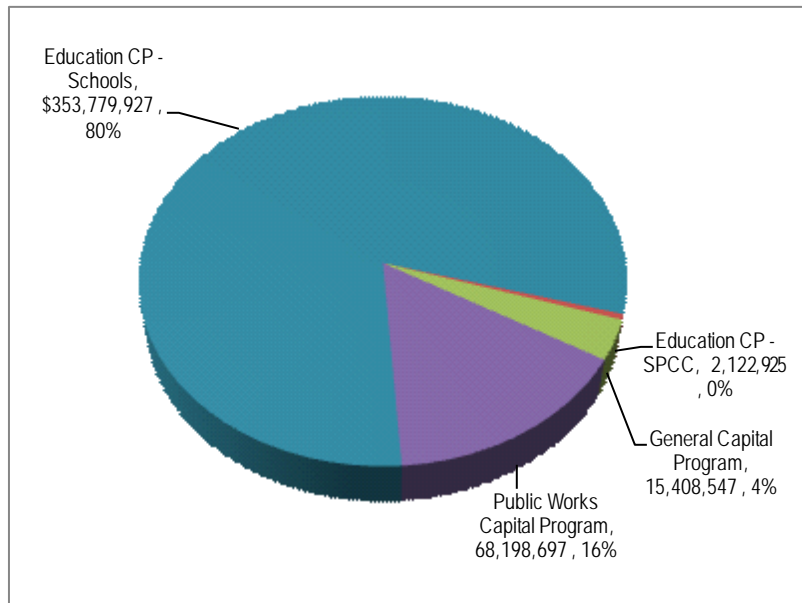
After FY 2023, the debt service begins to decline significantly through the remaining period. Within twelve



years after FY 2023, the County's debt service will be half of what it is proposed for FY 2023.

The current outstanding debt as of June 30, 2016 will be \$439.5 million as illustrated by the table below. 80 percent is comprised of the education capital program debt, while 16 percent is public works capital program debt, and 4 percent is general capital program debt. The outstanding debt per capita is \$1,604 for the schools education capital program, \$10 for the SPCC education capital program, \$309 for the public works capital program and \$70 for the general capital program.

Capital Program	Outstanding at June 30, 2016	Outstanding Debt / Capita
Education CP - Schools	\$ 353,779,927	\$ 1,604
Education CP - SPCC	2,122,925	10
General Capital Program	15,408,547	70
Public Works Capital Program	68,198,697	309
<b>Total</b>	<b>\$ 439,510,095</b>	<b>\$ 1,993</b>



A portion of the local option sales tax, as prescribed by North Carolina State General Statutes, is used to support the education capital program or the indebtedness incurred by the County for Union County Public School purposes as discussed in the revenue highlights of the budget document.

- Article 40 Local Option Sales Tax: The County is mandated to use 30% of the revenue received from Article 40 for Public School Capital Outlay purposes or to retire any indebtedness incurred by the County for Public School purposes.
- Article 42 Local Option Sales Tax: The County is mandated to use 60% of the revenue received from Article 42 for Public School Capital Outlay purposes (as defined in G.S. 115C-426(f)) or to retire any indebtedness incurred by the County for Public School purposes.

In 2016, the North Carolina General Assembly adopted a new Article 44 Local Option Sales Tax (G.S. 105-524), which expanded the sales tax base, creating an anticipated \$84.8 million that will be distributed to 79 counties according to allocation percentages (G.S. 105-524(c)). The County's share of the \$84.8 million, excluding amounts applicable to municipalities, is anticipated to be \$3,058,384. This distribution of additional sales tax revenue must be used for economic development, public education, and/or community colleges. In the FY 2017 Budget, this amount has been allocated to cover debt service requirements for the Union County Public Schools.

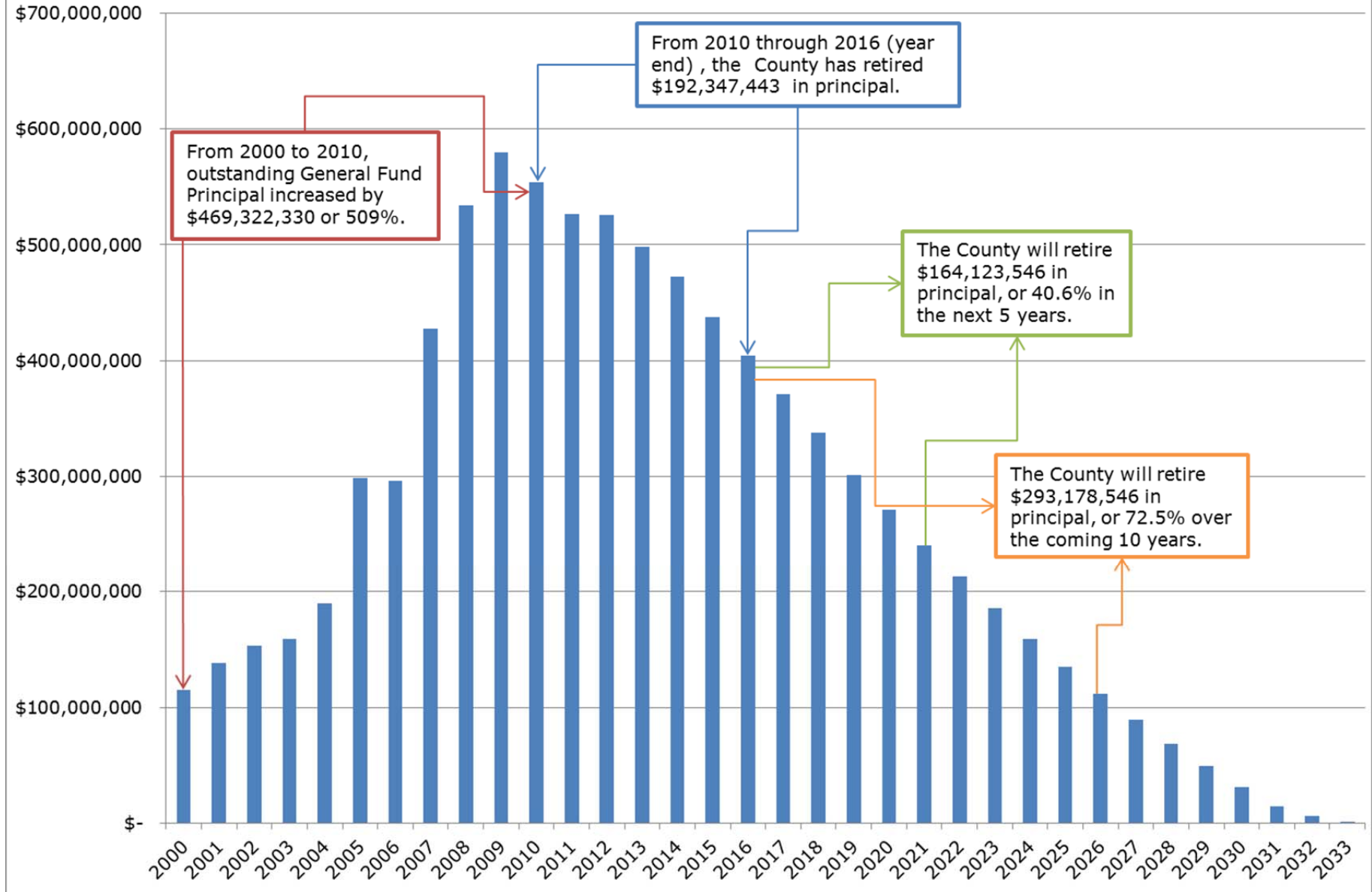
The graph on the following page indicates the *current* outstanding General Fund principal balances. These will change as new debt is added, however it illustrates the County's voracity for principal amortization. Due to this discipline, they County typically amortizes their capital projects under 20 years, however the 2006 Certificates of Participation and 2007 General Obligation Bonds required a 25 year amortization, and will mature in 2032 and 2033 respectively.

While this graph portrays the outstanding principal, it is important to understand the debt load in the coming years and the impacts on future borrowing capacity.



# Outstanding General Fund Debt

(assumes current debt only)



Source: Union County Administrative Services, Finance, as of 6/30/2016



## Education Capital Program Debt

Over the past twenty years, \$612.0 million of general obligation bonds and certificates of participation have been issued by the County to fund UCPS and SPCC land, facilities construction, and facilities improvements as delineated in the following table.

Education Capital Program Debt Issuances		
Type and Purpose	Issued	Original Issue Amount
GO Bonds - UCPS	November 1996	\$ 11,260,000
GO Bonds - UCPS	September 1999	30,050,000
GO Bonds - UCPS	March 2001	56,700,000
COPs - UCPS	June 2003	8,436,943
COP's - SPCC	June 2003	4,448,730
GO BAN's - UCPS	Multiple - 2004	48,265,000
GO Bonds - UCPS	June 2005	90,000,000
COPs - UCPS	November 2006	77,640,000
GO Bonds - UCPS	September 2007	220,730,000
GO Bonds - UCPS	March 2009	64,500,000
<b>Total</b>		<b>\$ 612,030,673</b>

The debt service for the outstanding portion of the \$612.0 million will be retired by March 1<sup>st</sup>, 2033.

An additional \$40.2 million is proposed (for referendum) for several South Piedmont Community College (SPCC) projects. The annual debt service impact of the proposed \$40.2 million is projected to begin in FY 2019 and would conclude within twenty years of issuance.

The projected FY 2019 debt service for the additional \$40.2 million would equate to approximately 1.25 pennies of the projected FY 2019 ad valorem value.

An additional \$54.02 million is proposed (for referendum) for several Union County Public School (UCPS) projects. The annual debt service impact of the proposed \$54.02 million is projected to begin in FY 2019 and would conclude within twenty years of issuance.

The projected FY 2019 debt service for the additional \$54.02 million would equate to approximately 1.60 pennies of the projected FY 2019 ad valorem value.

The projected existing and proposed new education capital program debt service is shown in the following table.

Education Debt Amortization Schedule			
Fiscal Year	Principal	Interest	Total
FY2017	\$ 30,846,174	\$ 12,233,200	\$ 43,079,373
FY2018	30,786,022	11,241,952	42,027,974
FY2019	34,699,586	14,754,836	49,454,421
FY2020	34,044,627	13,329,510	47,374,137
FY2021	30,911,527	11,814,215	42,725,742
FY2022	30,686,285	10,659,059	41,345,344
FY2023	30,776,308	9,364,329	40,140,637
FY2024	28,205,705	8,132,249	36,337,954
FY2025	27,003,158	7,076,969	34,080,127
FY2026	26,836,159	6,114,075	32,950,234
FY2027	24,845,181	5,205,170	30,050,351
FY2028	24,159,203	4,268,548	28,427,751
FY2029	22,833,919	3,482,892	26,316,811
FY2030	21,586,000	2,718,924	24,304,924
FY2031	12,826,000	2,139,589	14,965,589
FY2032	9,311,000	1,730,730	11,041,730
FY2033	6,211,000	1,430,942	7,641,942
FY2034	4,711,000	1,177,750	5,888,750
FY2035	4,711,000	942,200	5,653,200
FY2036	4,711,000	706,650	5,417,650
FY2037	4,711,000	471,100	5,182,100
FY2038	4,711,000	235,550	4,946,550
<b>Total</b>	<b>\$ 450,122,852</b>	<b>\$ 129,230,438</b>	<b>\$ 579,353,290</b>

This list excludes any capital requests received by the Board until they are added to the CIP. The above list is dependent on a passed referendum by the residents of Union County.



### General Capital Program Debt

During the past ten years, \$34.2 million of general obligation bonds, certificates of participation, and installment financing have been issued by the County to fund General Capital Projects such as the Judicial Center, the Agricultural Center, Library projects, Law Enforcement facilities, and E911 Radio System/Equipment.

General Capital Program Debt Issuances		
Type and Purpose	Issued	Original Issue Amount
COP's - Judicial Center	June 2003	\$ 15,464,022
COP's - Ag. Center	June 2003	4,845,379
COP's - Library	June 2003	2,737,323
GO BAN's - Firearms Range	Multiple - 2004	525,000
GO BAN's - Jail Expansion	Multiple - 2004	467,500
GO BAN's - Animal Shelter	Multiple - 2004	742,500
Installment Financing - E911 Radio System	June 2009	9,390,000
<b>Total</b>		<b>\$ 34,171,724</b>

An additional \$111.4 million of referendum approved general obligation bonds are proposed for the following programs.

General Capital Program Proposed Debt Issuances	
Type and Purpose	Issue Amount
4H Pavilion and Ancillary Facilities	\$ 5,697,353
Emergency Management - E911 Center	8,150,000
Jail and Sheriff's Office Replacement and Expansion	72,729,924
Jessie Helms Park Development	7,500,249
Library Expansion and Development	17,321,706
<b>Total</b>	<b>\$ 111,399,232</b>

General obligation bonds of \$10.1 million are proposed for a fall 2016 referendum and \$101.3 million are proposed for a FY 2018 referendum. The annual debt service of the general obligation bonds would begin within a year of issuance and would retire within twenty years of issuance.

The projected combined debt service for the additional \$111.4 million would equate to approximately 4.71 pennies of the projected FY 2017 ad valorem value.

The projected existing and proposed additional general capital program debt service is shown in the following table.

General Government Debt Amortization Schedule			
Fiscal Year	Principal	Interest	Total
FY2017	\$ 2,404,991	\$ 503,795	\$ 2,908,786
FY2018	2,415,580	431,755	2,847,335
FY2019	3,620,047	853,428	4,473,475
FY2020	7,511,373	5,806,346	13,317,719
FY2021	6,749,473	5,463,910	12,213,383
FY2022	6,739,715	5,140,055	11,879,770
FY2023	6,639,692	4,818,354	11,458,046
FY2024	6,035,296	4,508,716	10,544,011
FY2025	6,712,842	4,192,153	10,904,995
FY2026	5,709,841	3,885,253	9,595,094
FY2027	5,700,819	3,603,565	9,304,384
FY2028	5,691,797	3,322,082	9,013,879
FY2029	5,682,081	3,040,805	8,722,886
FY2030	5,570,000	2,759,750	8,329,750
FY2031	5,570,000	2,481,250	8,051,250
FY2032	5,570,000	2,202,750	7,772,750
FY2033	5,570,000	1,924,250	7,494,250
FY2034	5,570,000	1,645,750	7,215,750
FY2035	5,570,000	1,367,250	6,937,250
FY2036	5,570,000	1,088,750	6,658,750
FY2037	5,570,000	810,250	6,380,250
FY2038	5,570,000	531,750	6,101,750
FY2039	5,065,000	253,250	5,318,250
<b>Total</b>	<b>\$ 126,808,547</b>	<b>\$ 60,635,218</b>	<b>\$ 187,443,765</b>

All future general obligation debt issuance projections have been calculated on generally accepted repayment methods, with level principal structure, interest rates of 5%, and a 20 year amortization period.



### Public Works Capital Program Debt

During the past twenty years, \$117.0 million of revenue bonds, and N.C. Clean Water Revolving Loans (NC CWRL) have been utilized by the County to fund water and wastewater infrastructure projects. These are delineated in the following table.

Public Works Capital Program Debt Issuances		
Type	Issued	Original Issue Amount
Revenue Bonds	May 1996	\$ 21,245,000
NC CWRL	June 1998	4,673,933
Revenue Bonds	June 2003	33,130,000
NC CWRL	June 2008	15,000,000
Revenue Bonds	June 2009	20,000,000
Revenue Bonds	December 2015	22,955,000
<b>Total</b>		<b>\$ 117,003,933</b>

An additional \$385.1 million of water and waste water revenue bonds is proposed over five years to fund the water and wastewater system improvement and expansion projects. Proposed issuance timing and amount are shown below.

Public Works Capital Program Proposed Debt Issuances		
Type	Timing	Revenue Bond Amount
Revenue Bonds	FY 2017	\$ 94,680,000
Revenue Bonds	FY 2019	98,720,000
Revenue Bonds	FY 2020	159,045,000
Revenue Bonds	FY 2021	32,660,000
<b>Total</b>		<b>\$ 385,105,000</b>

The annual debt service impact of the four proposed additional revenue bond issuances totaling \$385.1 million is projected to begin in FY 2018, FY 2020, and FY 2022 respectively; and would conclude within twenty five years for each issuance. The projected existing and proposed additional public works capital program debt service is shown in the following table.

Public Works Debt Amortization Schedule			
Fiscal Year	Principal	Interest	Total
FY2017	\$ 4,618,697	\$ 2,736,389	\$ 7,355,085
FY2018	4,505,000	2,585,497	7,090,497
FY2019	6,610,000	7,172,097	13,782,097
FY2020	6,865,000	6,902,136	13,767,136
FY2021	7,965,000	11,569,767	19,534,767
FY2022	8,090,000	11,223,944	19,313,944
FY2023	12,435,000	20,456,175	32,891,175
FY2024	13,000,000	19,886,918	32,886,918
FY2025	13,580,000	19,288,825	32,868,825
FY2026	14,220,000	18,655,303	32,875,303
FY2027	14,860,000	17,997,597	32,857,597
FY2028	15,545,000	17,299,839	32,844,839
FY2029	15,535,000	16,566,996	32,101,996
FY2030	14,300,000	15,864,046	30,164,046
FY2031	15,010,000	15,161,790	30,171,790
FY2032	15,760,000	14,424,624	30,184,624
FY2033	16,535,000	13,650,548	30,185,548
FY2034	17,355,000	12,838,312	30,193,312
FY2035	16,880,000	11,985,725	28,865,725
FY2036	17,720,000	11,141,725	28,861,725
FY2037	18,580,000	10,278,475	28,858,475
FY2038	19,485,000	9,372,925	28,857,925
FY2039	20,435,000	8,419,450	28,854,450
FY2040	21,455,000	7,419,225	28,874,225
FY2041	20,960,000	6,368,750	27,328,750
FY2042	22,000,000	5,320,750	27,320,750
FY2043	23,130,000	4,220,750	27,350,750
FY2044	17,540,000	3,064,250	20,604,250
FY2045	18,420,000	2,187,250	20,607,250
FY2046	12,340,000	1,266,250	13,606,250
FY2047	12,985,000	649,250	13,634,250
<b>Total</b>	<b>\$ 458,718,697</b>	<b>\$ 325,975,577</b>	<b>\$ 784,694,274</b>

All future debt issuance projections have been calculated on generally accepted repayment methods, with interest rates of 5% and a 25 year amortization period.



## Debt Management and Debt Ratios

As a result of growth, there was pressure to expand a variety of needs within the County. As such, the County tries to provide a service that is appropriate, equitable and fiscally conscious. Some of the reasons Union County drew people and benefitted from growth were: the tax rate, schools, availability of homes, and nearby jobs.

In 2000 Union County ranked 49<sup>th</sup> in highest tax rate within the State, at \$0.66 per \$100 of assessed value, today the County ranks 23<sup>rd</sup>. Over that same period 59 (of 100) counties increased their tax rate, while the balance either decreased or stayed the same. Union County's rate increase was the 8<sup>th</sup> largest in the State.

The County has identified key debt ratios that are used in determining creditworthiness. The County is responsible for annual updates with the three rating agencies, and uses our information and that of other counties to weigh ourselves against other North Carolina counties.

More appropriately, Union County is compared against the counties whose population is greater than 100,000, to get a better idea of those that are similar in size and dealing with similar issues. The following is a comparison of the 27 North Carolina counties that fit that description, and is provided based on FY 2015 audits.

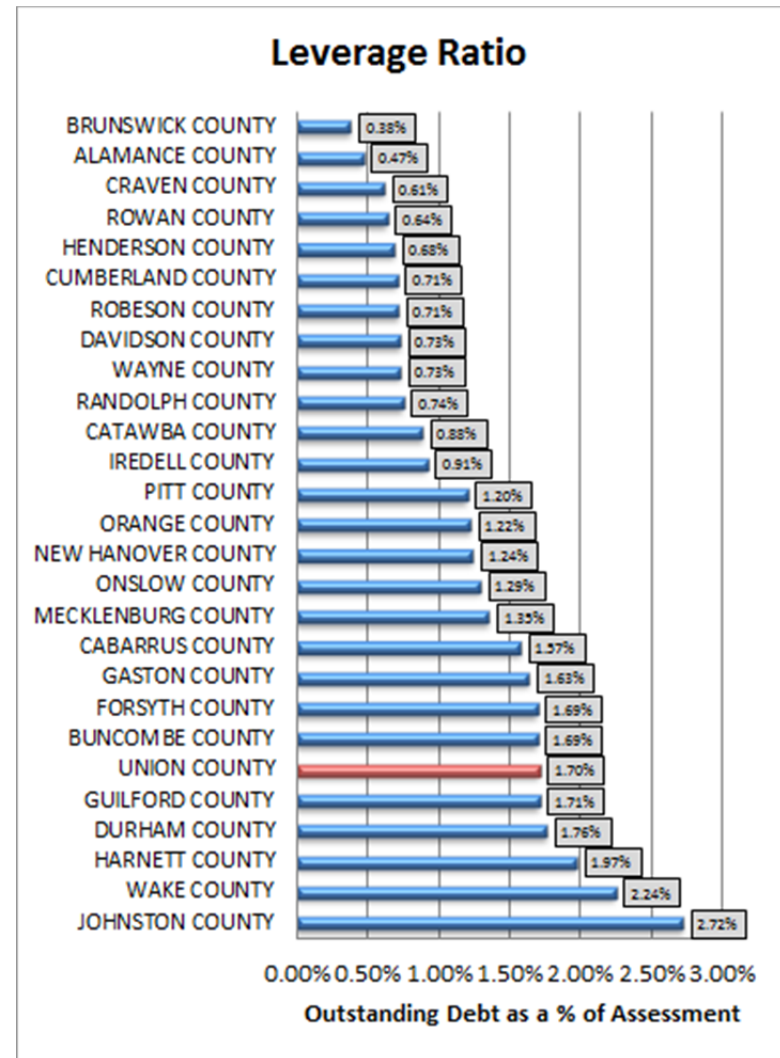
The following ratios are laid out in Section C, Readers Guide and Policies:

- Debt as a percentage of assessed value
- Debt Per Capita
- Debt Per Capita as a percentage of income
- Debt Service as a percentage of general fund expenditures
- General Fund Balances as a percentage of General Fund Operating Expenses

Furthermore, the tax rate has been graphed against the same group of counties with populations over 100,000.

## Debt as a Percentage of Assessed Value

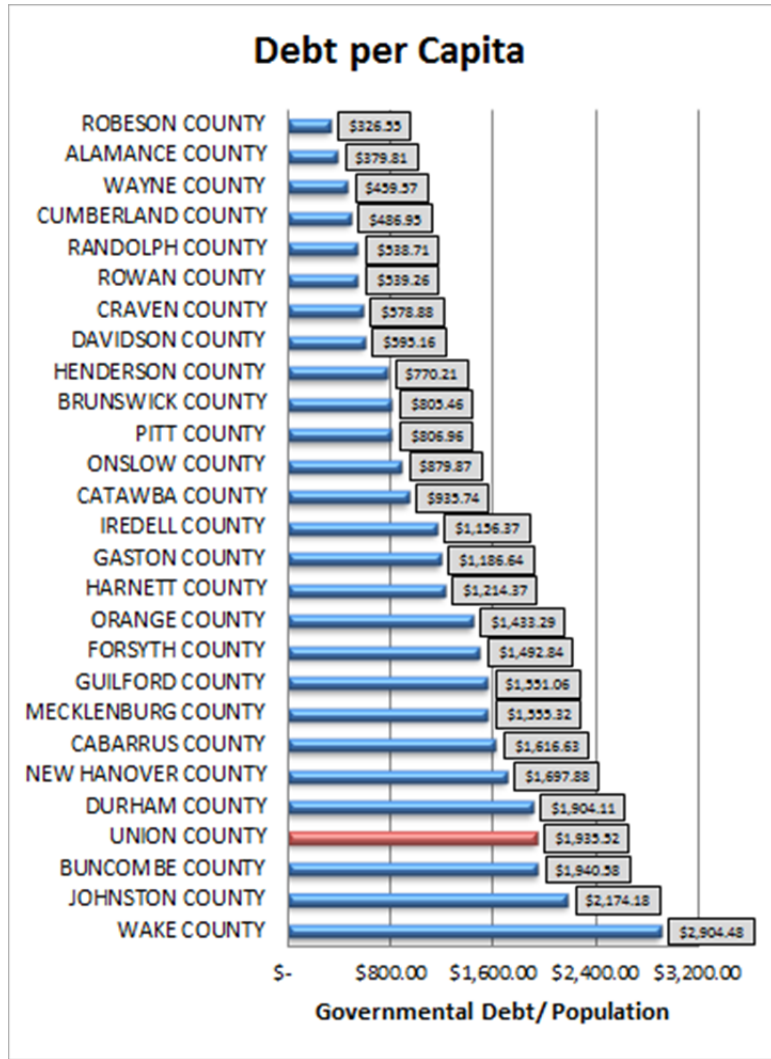
This is commonly referred to as leverage ratio in municipal governments and it measures the extent by which a government entity relies on tax supported debt. The calculation relies on all tax supported, long term debt and is divided by the assessed value.





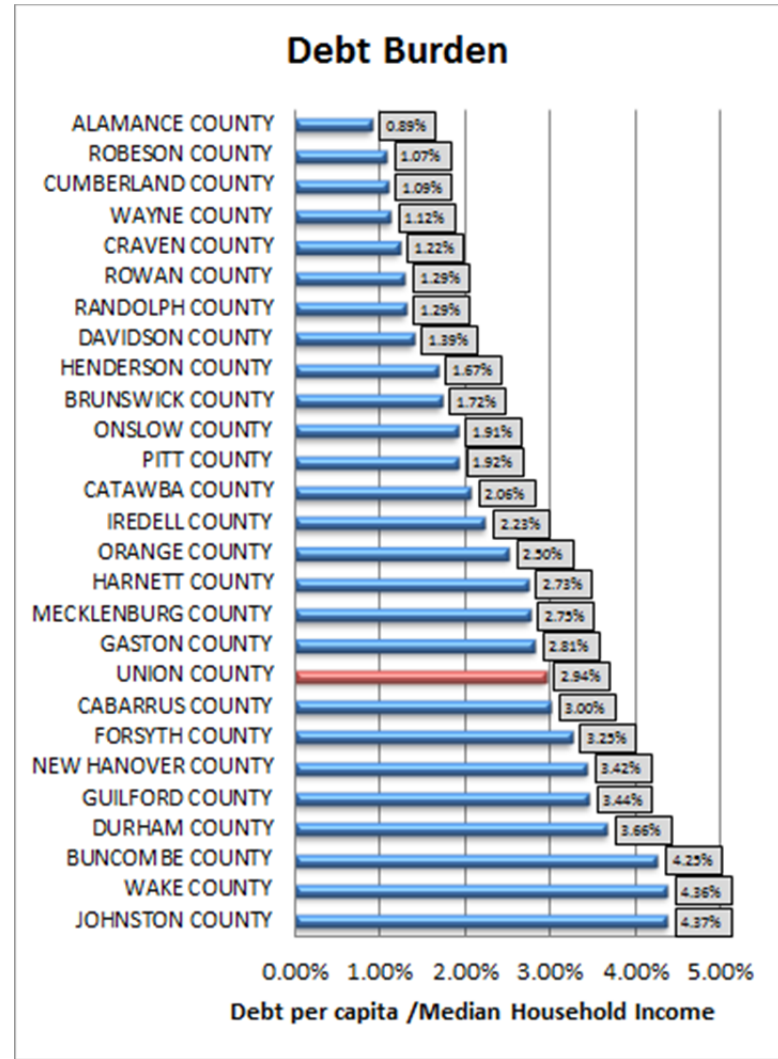
Debt per Capita

This is a measure of County debt on a personal basis, and it represents an individual's share of the County wide governmental debt load. The calculation relies on all tax supported, long term debt and is divided by the annual population (provided by the State demographer).



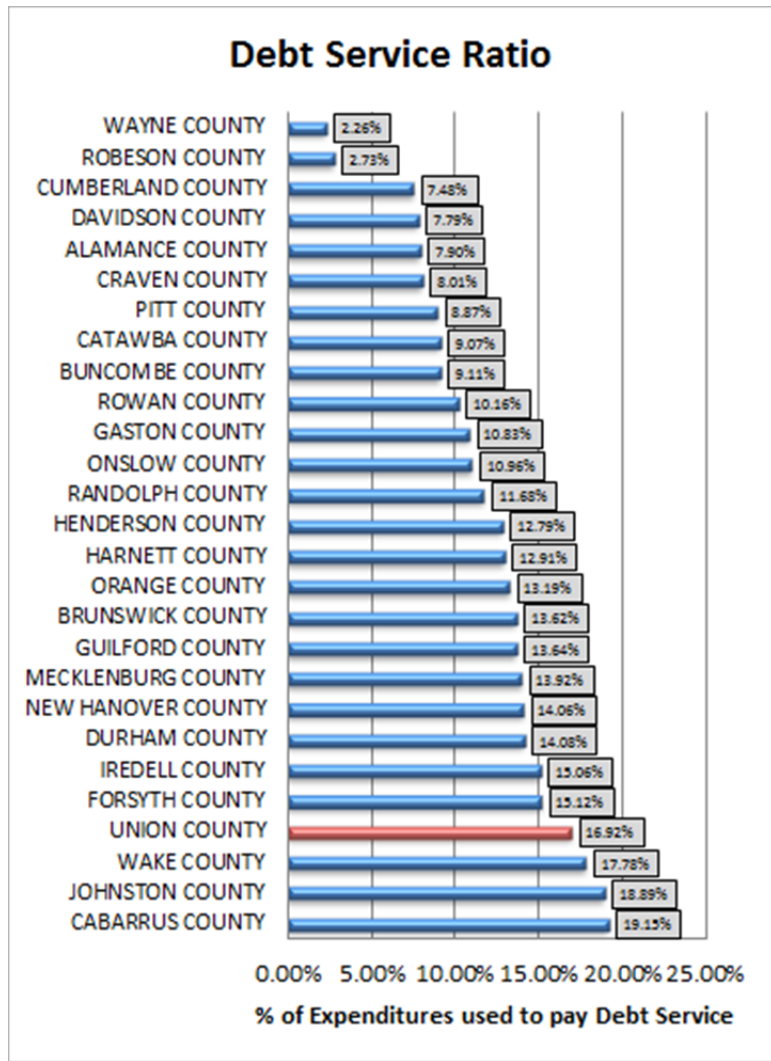
Debt per Capita as a percentage of income

This is a measure of debt per capita as a percentage of income, and measures affordability. This measure is commonly known as debt burden. The calculation takes the debt per capita calculation (seen to the left) and is further divided by the County's Median Household Income (provided by the Bureau of Labor Statistics).



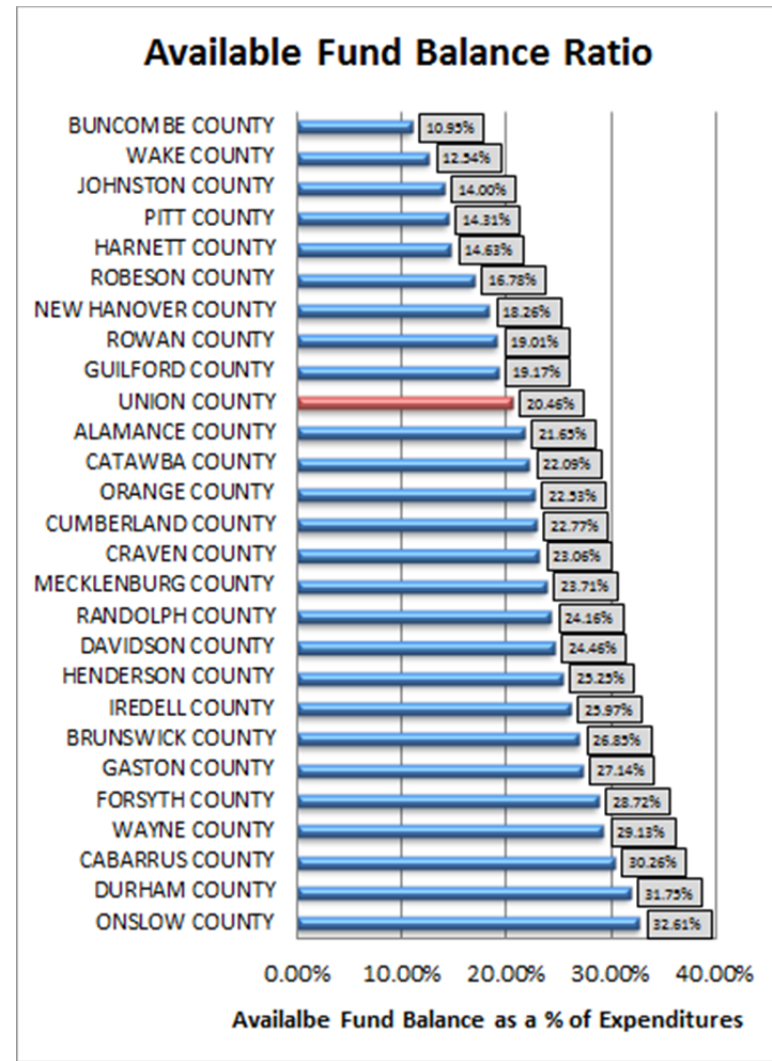
### Debt Service Ratio

This is a measure of annual debt service, considering the total expenses of the governmental unit. The calculation provides feedback on flexibility of expenditures within the unit, whereby the higher the percentage, the less flexible the unit becomes.



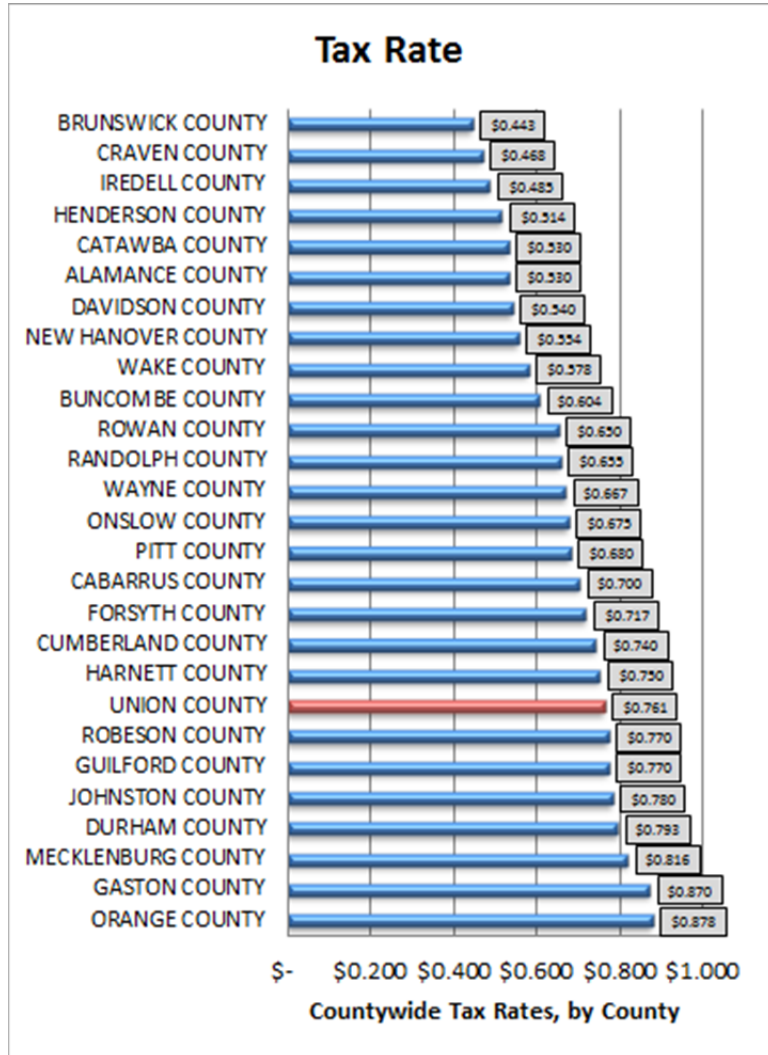
### Available Fund Balance Ratio

This is a measure of the solvency of a government unit. The calculation measures a County's ability to address long term obligations if revenues are not available. This is an important ratio that measures the time in which a unit could cover expenses. For Union County, it means the County has approximately 75 days of available funds, down from 84 days in FY 2014.



## Tax Rates

The tax rate is the posted rate by which the unit of government is going to tax assessed property in the current year. There is no calculation, and the information can be found within each entity's operating budget. Some counties have bifurcated their tax rates between purposes, as Union County has done. The following (combined) rates were for FY 2015.



In summary, the comparative ratios rely on good data available from not only the counties, but also the State of North Carolina to be able to measure our fiscal health against other, similar sized units of government.

The County has been, and continues to be, active in searching for better solutions to the debt portfolio, having refunded over \$300 million in governmental (non-enterprise) debt since 2010. This is evident as Governmental funds debt service has dropped from \$52,367,596 in FY 2012 to \$47,348,877 in FY 2014.

The County continues to remain strong, yet challenged by being above average with our tax rate, debt ratio and debt per capita. The County pays the fourth greatest amount of debt service as a percentage of expenditures in the State, at 16.92% in FY 2015 (last fiscal year ended). FY 2014 was however the high water mark, as the County has averaged over 21% over the last four fiscal years, well above the average in North Carolina, and considered high by the rating agencies. The County remains the fourth highest in debt per capita and only dropping below the highest, in FY 2013, after six years topping the list.

The debt burden will remain high, in contrast to the County remaining one of the top five highest Median Household Incomes in the State. The debt to assessed value remains the fifth highest in the State, and will likely only decrease as a result of annual debt payments.

The County's willingness to hold a greater level of fund balance has acted as an offset to the amount of debt, proving helpful to the debt ratings. The County is 18<sup>th</sup> lowest among 27 counties for the available fund balance ratio.

The County has strengthened the fund balance policy, increased strategic reserves, and lowered the annual debt service through refunding opportunities. **As a result, the County was rewarded with upgrades to the General Obligation Bond ratings by Moody's Investor Services and Fitch Ratings in November 2015 to Aaa and AAA, respectively, the highest municipal credit rating available.**



